Comment to the Editor
We thank the Editor for the thorough assessment of the manuscript. We replied to each individual area of concern expressed by the Reviewers as it can be read below.

Response to Reviewer #3
Reviewer comments shown as "RC:", author replies as "AR:".

RC: Review of Salerno and Guyennon et al. for ESSD data description paper
General comments
The manuscript describes and make available an important dataset of weather station data at the elevation of glacier ablation zones in the region. The dataset is useful, unique and I highly recommend that the data is made freely available. However, I don't think the manuscript is sufficient to support the publication of the dataset in the current version.
AR: We thank the Reviewer for the thorough assessment of the manuscript. All comments have been addressed, providing a point-to-point response to each comment.

RC: Specific comments
The manuscript is structured like a regular research article – this is not necessary for the ESSD dataset description format. I think this might be a contributing factor to why I find the manuscript hard to use as a dataset description paper in the current state. Overall, I think the paper could be restructured to a structure like this:
Introduction
Area description
Data description
General AWS description
Specific details on maintenance and precipitation undercatch etc..
If the data is published with filled gaps, then the gap filling should go here.
Statistical analysis
Statistical method
If gap filling is done only for the purpose of the statistical method then the description should go here
Results from the statistical analysis
Discussion of the statistical analysis
Conclusion of the statistical analysis
Data availability
Overall conclusion (mainly just summing up)
I don't think the data portal description belongs in an ESSD dataset description paper, but I will leave this up to the editor to decide.
AR: The overall text has been adapted considering the proposed structure by the reviewer. We clarified that we are publishing two kinds of data: filled monthly time series for Tmax,Tmin, Tmean, and Prec (1994-2023) and hourly raw data for all variables (Air temperature, Precipitation, Relative humidity, Atmospheric pressure).We inserted the following new sections: "3.2 Data description" section and "5 Discussion of the statistical analysis" section

RC: I hope the following comments will help clarify:
Section 3.1 gives a nice overview of the location and history of the AWSs and instruments incl. uncertainty is listed in Table 3. However, here I am missing more detail on the instrument's maintenance schedule, recalibration of hygrometer and a short description of under catch in the precipitation gauge (this is mentioned later but it would be nice to have it already here).
AR: The suggestion has been followed and these parts have been discussed in the new 3.2 section.

RC: Section 3.3 heavily relies on the description of gap filling method in Salerno et al., 2015 which makes the section hard to understand when you have not read the paper. So, I think the method for gap filling should be elaborated here so this section can stand by itself.

AR: In Salerno et al., 2025 we decided to put the details on the filling method in the Supplementary Material because it is articulated, although it is well described in all its details. We think that if the reader is interested in the adopted methodology he can easily access this material. Furthermore, we think that copy and paste this method in the main text of this paper could compromise the readability. On other option could be to create a new Supplementary Section for this paper, but we leave the Editor to decide on this.

RC: Figure 5: In the total precipitation there is clearly a shift in monthly trend data around 2001. I guess this is likely to be due to a change in instrumentation or logging frequency or something else – but this should be discussed in the main text.

AR: We improved the readability of figure 5, so that the errorbar associated with the uncertainty of the reconstruction does not interfere with the readability of the month mean values (see also figure R3). Over the 1994-2001 period, the reconstruction relied almost totally on the AWS0 station. During their common time of observation, AWS0 and AWS1 measured highly similar data (daily total precipitation correlation between the two stations is 0.97, n=2298), but with some differences. In the reconstruction (fig. 5), the systematic bias in the daily precipitation distribution between AWS0 and AWS1 has been corrected with a quantile mapping regression (e.g. Déqué 2007). The uncertainty associated with the quantile mapping is monitored, together with uncertainty of the multiple imputation for further missing data. Details are given in Salerno et al. (2015, supplementary material (https://tc.copernicus.org/articles/9/1229/2015/tc-9-1229-2015-supplement.pdf). We think that the step change impression in 2001 is more a consequence of the visual impact of the uncertainty associated with AWS0 imputation. We are confident in the trend estimation reliability, with a known large uncertainty on the associated intensity (-5.9 +/- 4.4). It is worth noting that such a result is in line with the impact of increased katabatic winds on the precipitation reduction due to a downward shift of the convergence elevation as described in Lin et al. (2021) and Salerno et al. (2023).

The manuscript has been corrected adding the uncertainty associated with the precipitation trend.
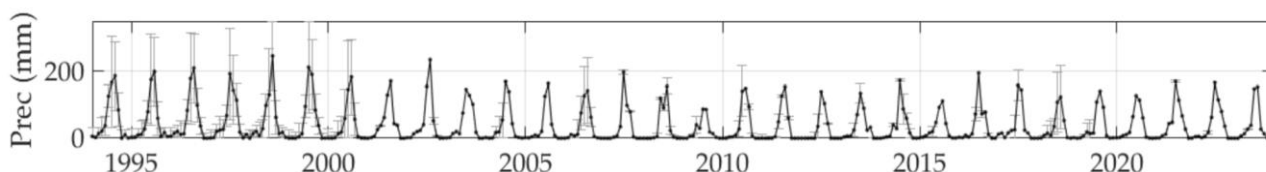

Figure R3 Pyramid monthly precipitation and associated gap filling uncertainty. The visual impact of uncertainty has been reduced to avoid confusion.

RC: Line by line

38-41: This is interesting – but I don't think it is relevant in the context of this manuscript.

AR: We think that monitoring how climate changes at high elevation is useful also for human systems and Alpine biomes. Glaciers are only one of the elements impacted by climate change..

RC: 50: When you write "few" maybe you mean "only few"?

AR: Modified as suggested.

RC: 52: It is mentioned section 3.1 line 128-134 that there are stations at higher elevation than the stations mentioned here. Maybe this statement belongs better here in the introduction?

AR: Modified as suggested.

RC: 167-168: Perhaps reformulate: Pyramid station has data gaps corresponding to ca. 10 and 15 % of …

AR: Modified as suggested.

RC: 262-264: I believe this statement belongs in the results and discussion section especially when referring to another study. One possibility is to split results and discussion in two subsections to make it possible to summarize the findings in the results in the discussion and compare to what other have found.

AR: The suggestion has been accepted and a discussion section has been created.

RC: Figures and tables
Figure 5: The panels should be marked with a) b) c) and d) and units should be on the y-axis of all subpanels.

AR: We edited Fig. 5 and its caption to improve readability.

RC: Table 2: The caption should be changed so that it starts with the word Percentage (and not %). The first field in the table should describe what is in the top row and first column currently it is just a mini-caption.

AR: Done.